

BUREAU OF ENVIRONMENT CONFERENCE REPORT

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting

DATE OF CONFERENCE: May 20, 2020

LOCATION OF CONFERENCE: John O. Morton Building

ATTENDED BY:

NHDOT

Sarah Large
 Ron Crickard
 Andrew O’Sullivan
 Matt Urban
 Mark Hemmerlein
 Ron Kliner
 Meli Dube
 Phil Brogan
 Mike Mozer
 David Scott
 Tobey Reynolds
 Jason Abdulla
 Maggie Baldwin
 Rebecca Martin
 Anthony Weatherbee
 Carol Niewola
 Will Stanfield
 Bill Saffian

ACOE

Rick Kristoff

EPA

Beth Alafat

**Federal Highway
Administration**

Jaimie Sikora

NHDES

Lori Sommer
 Karl Benedict

NH Fish & Game

Carol Henderson

The Nature Conservancy

Pete Steckler

**Consultants/Public
Participants**

Christine Perron
 Nathan Rosencranz
 Peter Walker
 Greg Goodrich
 Leslie Palmer
 John Pelletier
 John Gorham
 Marv Everson
 Jennifer Doyle-Breen
 Richard Devanna
 Beatrice Hunt
 Todd Dwyer

PRESENTATIONS/ PROJECTS REVIEWED THIS MONTH: *(minutes on subsequent pages)*

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(When viewing these minutes online, click on a project to zoom to the minutes for that project.)

NOTES ON CONFERENCE:**Meeting Minutes**

Postponed finalizing the April 15, 2020 meeting minutes until June.

Claremont, #27691

Christine Perron from McFarland Johnson provided an overview of the project area and resources identified to date. This project will address Bridge 072/127, which carries NH Route 12A over the Sugar River in Claremont. The project is a non-federal bridge rehabilitation and scour protection project. The bridge is a 1967 three-span steel girder bridge with a concrete deck. It is on the NHDOT red list of bridges due to the poor condition of the deck, and the bridge is also rated as scour critical during floods.

The Sugar River is subject to the NH Shoreland Water Quality Protection Act, and the need for a Shoreland permit is anticipated. The bridge is considered a Tier 3 stream crossing under the NHDES stream crossing rules. The river is not considered a navigable water for the purposes of US Coast Guard jurisdiction. A delineation was completed and the only jurisdictional areas within the project are the bank and channel of the river. The Sugar River is a FEMA-mapped regulatory floodway with a 100-year floodplain (Zone AE) on both sides of the river.

The NH Natural Heritage Bureau reviewed the project and does not anticipate any impacts to rare species or natural communities. The federally listed northern long-eared bat and dwarf wedgemussel have the potential to occur within the project area according to the USFWS IPAC webtool. When the project was initiated, NH Fish & Game asked that a mussel survey be completed for the project. The survey was completed by Biodiversity and found generally poor mussel habitat within the project area with no live mussels, mussel shells, or shell fragments. The report will be forwarded to NH Fish & Game and USFWS.

The Sugar River is a predicted coldwater fishery according to the NHDES Aquatic Restoration Mapper. It is also designated as Essential Fish Habitat for Atlantic salmon; however, the National Marine Fisheries Services is not currently consulting on projects located within the Connecticut River watershed and an EFH Assessment is not required.

Nate Rosencranz from TranSystems provided an overview of proposed work. The rehabilitation will include painting the steel, replacing bridge bearings, and deck patching. This work will not be located within the river. The only proposed in-water work is associated with the placement of scour protection at the one scour critical pier in the river. The proposed protection method is A-Jacks. To avoid an increase in base flood elevation, the A-Jacks will be embedded in the stream channel. This work will be completed within a cofferdam. Construction access will require a temporary bulkhead off the bank of the river, most likely in the northeast quadrant, and a temporary work trestle to reach the pier.

Based on the project's current schedule, preliminary design will be completed through 2020, with final design and permitting taking place in early 2021. The project will be discussed at future meetings as design progresses and preliminary impacts are available. The current advertising date for the project is September 2021.

Karl Benedict asked if the cofferdam would require a bypass of the river. N. Rosencranz responded that the cofferdam would be around one pier only, so only a portion of the river would be blocked.

K. Benedict noted that coordination with NHFG should occur to determine if any time of year restrictions were warranted for the protection of fisheries. He also noted that revegetation of impacted banks should be proposed in accordance with Shoreland requirements.

Lori Sommer commented that she was glad that the A-Jacks installation would be done in the dry to alleviate water quality concerns. She stated that the proposed A-Jacks entailed protection of existing infrastructure and no mitigation would be required.

Carol Henderson noted that this river is heavily stocked with rainbow trout and is a popular fishing spot. She asked that fishing access not be blocked during construction and noted that there may be a trail along the river that is used for fishing access. C. Perron replied that she was not aware of a trail but would look into it. The only restrictions during construction would be related to maintaining a safe buffer around the work zone.

Rick Kristoff asked for a copy of the mussel survey report. He noted that he would need to see confirmation that the proposed work would not impact flood storage. N. Rosencranz stated that a hydraulic report will be completed to document this.

Beth Alafat and Pete Steckler did not have any comments on the project.

Amy Lamb noted (via email) that the NHB review memo is out of date and an updated memo should be requested.

Sarah Large asked if the new stream crossing rules that address maintenance of an existing tier 3 crossing would need to be addressed in the permit application. K. Benedict replied that the application materials should note that the crossing would not be changing. He didn't think the project would need to be considered an alternative design.

This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.

Webster, # 40810

Peter Walker opened the meeting by orienting the attendees to the project location. The Clothespin Bridge spans the Blackwater River on Clothespin Bridge Road in Webster. The site is located in a rural portion of the town, and is located downstream of the US Army Corps of Engineers Blackwater Flood Control Dam. Frost Land and Detour Road are located on the west and east side of the bridge, respectively. One residence on Clothespin Bridge Road has a direct view of the bridge site, and presents a constraint to the design of the project – this home and its garage are located relatively close to the road. The river above the bridge is relatively steep, but transitions to a flatter reach below the bridge.

Greg Goodrich reviewed the engineering details. The bridge was rehabilitated in 1939, following a flood event. The existing bridge is a 65-foot long, single span, steel beam bridge with a reinforced concrete deck. Inspections have resulted in the following ratings: the deck is rated in serious condition, the superstructure is fair, and the substructure is in poor condition. The bridge is currently posted for load (E-2). The condition of the bridge, and the poor roadway geometry has led to the decision to replace the bridge entirely. Shifting the east abutment to south will help correct alignment issues. The current proposed design has considered the NHDES stream crossing rules and incorporates wildlife shelves on both the west and east abutments. The proposed design would relocate the west abutment further from the stream to open the bridge span in an effort to address NHDES stream crossing rules.

Pete reviewed the stream assessment conducted during this study. The bridge is located at a transition point between stream types, which complicated the assessment somewhat. Upstream is a steep reach with a highly entrenched pool-cascade morphology. Downstream, the river opens to a riffle-pool-glide morphology. The stream geomorphic assessment determined that reach of the river at the bridge is most appropriately classified as a Type B Stream, with a bankfull width of 64.4 ft, and a flood prone width of 92.6 ft. The calculated entrenchment ratio is 1.44. As mentioned, the existing bridge span is 65 ft. The proposed bridge span is 107 ft, along centerline of construction. However, due to the proposed skew, the actual span is 82 ft perpendicular to the channel. In order to match the 1.44 ER, the span should be 92.7 ft, so the design falls just short of this, and an alternative design report is planned. VHB considered lengthening the span, but determined that site constraints, cost implications, and other issues prevented a fully compliant span length.

In terms of addressing mitigation requirements, VHB believes the design will comply with Env-Wt 904.05(f), would improve hydraulic capacity and geomorphic compatibility, and would therefore not require project-specific mitigation. VHB will be coordinating with NH Fish and Game and US Fish and Wildlife regarding potential impacts to brook floater, Blanding's turtle, wood turtle, and northern long-eared bat. A Request for Project Review submittal to NHDHR is planned for June.

Following the consultant presentation, the meeting was opened to questions using a roll call format.

Karl Benedict (NHDES) acknowledged the hydraulic and geomorphic improvements. He noted that a previous permit application was submitted for this same bridge in 2017, but subsequently withdrawn. He requested that VHB review that file prior to application submittal. Karl asked for clarification of the wildlife shelf. Pete replied that the design incorporates a 2-ft wide shelf on each side of the bridge. Regarding mitigation, Karl suggested that VHB compare existing and proposed rip-rap.

Lori Sommer (NHDES) asked about the condition of the bank along Frost Lane – is it armored? She suggested that the project design look for an opportunity to enhance shoreline vegetation through replanting. Additional mitigation is likely not necessary. Lori also asked about whether the project would require a detour. Greg explained that the bridge would be entirely closed during construction, and that traffic would be routed along Detour Road.

Carol Henderson (NHF&G) supported the idea of incorporating a wildlife shelf. She requested that VHB coordinate with Kim Tuttle on wildlife impacts. A mussel survey may be needed.

Beth Alafat (EPA) endorsed Lori's suggestion that the design incorporate streambank restoration/plantings.

Pete Steckler (TNC) suggested that in this rural area, and due to constraints to terrestrial wildlife movement along the immediate streambank based on the site photos presented, a wildlife shelf may not provide significant benefit, and that he would support a design that reduced or even eliminated the wildlife shelf in order to minimize instream rip-rap and to maximize the channel opening, given that the bridge falls short of the target width from a geomorphic design standpoint .

He explained that the site location is a very permeable, low volume road, where terrestrial animals can easily cross at grade. He asked that VHB consider pulling back the bank armoring, particularly on the western embankment.

Rick Kristoff (USACOE) suggested that VHB may need to consult with the Corps under Section 408 regarding potential impacts to the federal project above the site. Pete Walker clarified that the dam is several river miles upstream, so direct impacts are not proposed.

This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.

Warner, #15907 (X-A001(029))

Phil Brogan, NHDOT Bureau of Bridge Design, began by providing an overview of the project area and purpose and need. The project will address structural deficiencies at Bridge #254/180 carrying NH Route 127 over the Warner River in the Town of Warner. The existing structure is a three-span 120' long continuous steel I-beam bridge which was constructed in 1937 after a previous covered bridge washed away during a March 1936 flood event. The bridge is on the State's red list due to poor deck condition. The purpose of the proposed project is to address safety and structural concerns such that the bridge may be removed from the red list and to remove the existing load posting. The need is demonstrated by the deteriorated condition of the bridge. Phil discussed the design alternatives currently under analysis. Alternative 1 involves replacement of the deck only. The alternative would maintain the current hydraulic opening because the existing abutments and piers would remain. Alternative 2 would involve replacement of the entire superstructure while maintaining the existing substructure. This would maintain the existing hydraulic opening. Alternative 3 would involve complete removal and replacement of the bridge with a new single span structure. This would remove the piers and improve the hydraulic opening, reconstruct the riprap around the abutments, improve drainage, and construct a vegetated treatment swale. Phil noted that Alternative 3, full replacement, is the preferred alternative of the Department and of the Town and residents in the project area. A 2010 consultant study concluded that a full replacement should be considered.

Phil provided a summary of the known resources and environmental concerns in the project area. The replacement alternative is anticipated to impact the Warner River, which is a Designated River and a Protected Shoreland Waterbody. A NHDES Standard Dredge and Fill Major Impact Permit and a USACOE State Programmatic General Permit are anticipated due to impacts associated with placing riprap in front of the proposed new bridge abutments and at the outlet of a proposed vegetated stormwater treatment swale. The Warner Conservation Commission and the Warner River Local Advisory Committee have been notified of the proposed work and are being updated as the design progresses. There are no delineated wetlands in the project area and the all impacts will be limited to the channel of the Warner River as there is no jurisdictional bank within the project area. Many populations of invasive plants were identified in areas that will be disturbed for the bridge work and construction of a treatment swale and will be managed appropriately during construction. The NH Natural Heritage Bureau was consulted and confirmed that there are no known records of State or Federally protected species or their habitats in the project area. The project is located within the range of the federally threatened northern long-eared bat (NLEB) and appropriate consultation with the US Fish and Wildlife Service is in progress. Additionally, the

bridge is individually eligible for listing on the National Register of Historic Places (National Register) and is a contributing resource to the Davisville Village Historic District, which is also eligible for listing on the National Register. There are also properties with structures which are identified as contributing to the Historic District in the northeast, northwest and southwest quadrants of the crossing which are also assumed to be individually eligible, as well as an archaeological site in the southeast quadrant which is a contributing factor to the Historic District and is assumed to be individually significant as well.

A formal stream crossing assessment was not completed. However, the bankfull width was estimated to be 143' using the regional curve and the stream is assumed to be a Type B stream (moderately entrenched) which would dictate the use of an entrenchment ratio between 1.4-2.2 to calculate a compliant structure, which would be between 202.2' and 316.6'. The Warner River is classified as R3UB1 in the project area and is described as a "riverine upper perennial system with a rock-cobble-gravel substrate with some areas of sand." A compliant sized structure was not considered as a viable alternative to move forward through the analysis phase due to the site constraints in the area, most notably the historic resources immediately adjacent to the bridge. While the project will impact the historic resources described above, increasing the size of the structure by 100' or more would have significantly affected the historic structures and altered the character of the Historic District. As such, hydraulic calculations for the crossing have not been completed.

Phil concluded the presentation by stating that the existing drainage on the bridge and in the project area is inadequate and results in erosion and sedimentation in the southwest quadrant and that the replacement alternative would increase the impervious surface area by approximately 1,000 square feet. A catch basin and vegetated treatment swale are proposed in the southwest quadrant to collect the stormwater runoff and appropriately channel it through the treatment area to eventually discharge into the Warner River. He noted that the treatment swale appears to pass through a vegetated area, however, the majority of this area is a Japanese knotweed infestation that will be removed and the wooded riparian buffer of the Warner River will be retained.

Jamie Sikora, FHWA, asked if a temporary bridge would need to be constructed to convey traffic during construction and requested that emergency response be considered. Meli Dube, NHDOT Bureau of Environment, stated that extensive coordination with the Town has occurred and they are in favor of the replacement option with a full road closure so no temporary widening or temporary structure would be necessary and that emergency response was considered as part of the Town's decision. Sarah Large, NHDOT Bureau of Environment, asked if the existing bridge passes the Q50 and/or the Q100? Phil replied that hydraulic analysis has not been completed but believes it does pass at least the Q100 and this can be confirmed in the future. Karl Benedict, NHDES Wetlands Bureau, stated that he agrees that the site constrictions limit the ability to install a compliant size structure and that the proposed alternatives make sense in the project area. He emphasized that if the Department is pursuing an alternative design for a non-compliant sized structure that the technical reports for the wetland application will still be required. Karl noted that even if the design does not meet the geomorphic design requirements, hydraulic data to confirm that the proposed bridge passes the Q100 will be required. If the proposed alternative cannot pass the Q100, then further alternative analysis will be necessary. Karl inquired as to whether the proposed treatment swale will meet AOT requirements and Phil responded that it will. The velocity

of the water through the swale is anticipated to be very low and will not cause erosion at the outlet into the Warner River. Karl requested that an attempt to use natural materials instead of stone at the outlet be investigated.

Lori Sommer, NHDES Wetlands Bureau, inquired as to whether construction access had been considered in the overall project impacts and impacts to the Warner River specifically. Phil replied that access had not yet been considered and that these refinements would occur during the final design phase of the project. Lori confirmed that the anticipated impacts to the river do not warrant mitigation but asked if the Department could address the invasive species in the project area. Meli replied that the Department will follow standard protocols for managing invasive species that are disturbed during construction but cannot chase removal of invasive species. Peter Steckler, the Nature Conservancy, observed that the crossing appears to have excellent terrestrial passage currently, specifically between the southern pier and southern abutment as the stone provides a wildlife “shelf” at the base of the slope, and requested that the new design mimic this condition. Phil asked for clarification on design specifications to maximize the benefits of the shelf and Peter responded that keeping the shelf on the southern side, at the base of the slope instead of up at the base of the abutment, and with a minimum of 8’ of headroom is preferable to accommodate larger species. Meli concluded the meeting by stating that this project would be reviewed at another meeting once an alternative is selected and impacts are refined.

This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.

Errol, #41069 (X-A004(565))

No minutes have been submitted to date.

This project was previously discussed at the 10/18/2017 Monthly Natural Resource Agency Coordination Meeting.

Laconia Municipal Airport

Carol Niewola reviewed the project’s purpose to remove obstructions to the airport’s protected airspace on airport-controlled properties. Carol noted the project is in the design stage now but will be funded with a federal grant from the FAA after bids have been opened.

John Pelletier reviewed: the purpose for presenting the project was to get feedback on permitting issues for the removal of trees in both the Runway 8 and 26 approaches as well as on the Airport; outcome of the 2019 Environmental Assessment was a FONSI; and the anticipated permits include wetlands permits, 404 ACOE permit, and possibly alteration of terrain permit and/or local timber harvesting permit. John used a prepared presentation that was viewed by the attendees.

J. Pelletier noted the following: the wetlands would be mapped in the Spring of 2020; the method on how the trees would be removed (i.e. clear and grub, trimming only) was being coordinated by the Airport with the property owners; and the project was intended to be bid this summer followed by a federal grant application this summer.

J. Pelletier summarized the presentation by requesting input on the permits required for the project.

Comments/Concerns:

- NHDES
 - Lori Sommer asked ‘do these wetlands freeze?’ because if they don’t freeze then rutting will be considered wetland disturbance.
 - J. Pelletier will review history of wetlands freezing with the airport.
 - L. Sommer asked ‘will there be any permanent impacts to the wetlands due to project construction access?’
 - J. Pelletier will review access routes to avoid wetland impacts.
 - L. Sommer asked ‘did the project get the grant.’ C. Niewola stated the project grant is in design phase and plans to put the project out to bid this summer.
 - L. Sommer stated that the project would need to provide evidence that the project activities in prime wetlands do not result in a significant net loss of function as stated in the town’s study.
 - Jacobs to obtain wetland function from the local authority and assess net loss of function.
 - Lori Sommer indicated that the vernal pools would need to be mapped. She indicated that the time to map the vernal pools may have past.
 - Jacobs to investigate evidence of vernal pools and advise.
 - Karl Benedict stated that the project ‘walks a fine line’ by not including the non-prime wetlands in the application. Karl recommended the project include tree removal in the non-prime wetlands in the application as temporary impacts. The project would also need to propose how any temporary impacts would be restored. Karl reiterated what Lori stated about demonstrating no net loss to the wetland functions from the project activities.
 - Jacobs to include temporary impacts in the wetland permit application.
 - K. Benedict asked if there were other wetland impacts at the airport in the past 5 years as these previous impacts would have to be included in the permit application as cumulative impacts. John Gorham stated that Jacobs has worked at the airport for the past 5 years and was not aware of any wetland impacts.
- NH Fish & Game
 - Carol Henderson passed along Amy Lamb’s statement about the project to be aware there was Loon nest added to the NHNHB database that the project may have to take into consideration. Carol noted that any other species would have to be investigated via the NHNHB database portal.
 - Jacobs to perform updated NHNHB database search.
- ACOE
 - Richard Kristoff asked if it is known how the work will be conducted in the wetlands. Will swamp mats or fill be required for access? If over 3 acres of impact the project will need an individual permit. If less than 3 acres, the project needs to comply with the state programmatic permit conditions.
 - Jacobs to determine how the work will be conducted in the wetlands.
- US EPA

- Beth Alafat asked if the project was for safety or for expansion of the airport. John Pelletier stated that the project is for safety. Beth reiterated need for vernal pool survey.
- The Nature Conservancy
 - Peter Steckler had no questions about this project.
- Jacobs
 - John Gorham asked if the trees could be cut and left in place. Matt Urban noted that this would be considered filling the wetlands and would have to be added as permanent impact. Jacobs to consider the removal of trees from the wetlands in the project requirements.

This project in this context has been previously discussed at the Monthly Natural Resource Agency Coordination Meeting.

Woodstock-Lincoln, #42534 (X-A004(896))

Jennifer Doyle-Breen, AECOM, presented the slides describing the project, impacts, and goals for the meeting. She provided an overview of the project site and scope and reminded the group that this project was initially presented at the February 18, 2020 meeting. The project scope is to repair the southern pier of the bridge that carries NH Route 175 over the Pemigewasset River (195/093) in the Town of Woodstock. Up to 15 feet of scour has occurred since the bridge was built in 1975. Calculations indicate that future scour could increase up to 17.5 feet below the existing streambed if no measures are implemented to stabilize the bridge pier. Natural resources present include the Pemigewasset River watercourse and adjacent Bank, 100-year floodplain, 250-foot Protected Shoreland, Atlantic salmon, and wood turtle. No vegetated wetlands are present. The confusion regarding the Certified Wetland Scientist (CWS) Ordinary High Water (OHW) line and the surveyor identified limit of water has been resolved. The surveyed line has been removed, and the CWS confirmed that the flag line shown represents both TOB and OHW.

J. Doyle-Breen indicated that there are alternative permanent scour repair measures as well as alternative construction access approaches, and any scour repair alternative can be matched with any of the construction access alternatives. She described the potential permanent scour repair alternatives, which include the following:

Alternative I: installing permanent sheet pile around the pier where scour has occurred to a depth below future calculated scour depth, and then backfilling the void inside of the sheet pile with gravel.

Alternative II: installing a temporary sheet pile cofferdam, installing concrete in the scour hole under the pier as a structural repair, as well as riprap fill in the river as a hydraulic countermeasure.

Alternative III: installing a temporary sheet pile cofferdam, installing concrete in the scour hole under the pier as a structural repair, as well as A-Jacks fill in the river as a hydraulic countermeasure.

These options are similar to those described in February, although Alternatives II and III have been modified to include a temporary cofferdam around the repair work area to allow concrete placement work in a dry rather than wet condition in order to protect water quality by facilitating an isolated work area and then pumping/monitoring/treatment of water before it is discharged back

into the river. Alternative I, involving permanent sheetpile, is the least costly alternative and includes the smallest footprint, and is therefore preferred.

J. Doyle-Breen then described the access alternatives and illustrated these by showing plans for each. The access alternatives include the following:

Alternative A: Southwest Temporary Road/Upstream Causeway

Alternative B: Southeast Temporary Road/Downstream Causeway

Alternative C: Existing Path Widening/Northeast Downstream Causeway

Alternative D: Existing Path Widening/ Northwest Upstream Causeway

Alternative E: Existing Path Widening/Northeast Downstream Trestle

Of the access alternatives, all involve temporary fill in the river and banks to varying degrees.

Compared to Alternatives A through D, Alternative E is significantly more expensive, and therefore not preferred. Alternatives A through D offer various pros and cons. Alternatives A and B include some safety concerns as they require construction of a new access road with an 8% slope. Also, these alternatives do not include readily available staging areas, so additional impacts would be required for clearing at the base of the slopes for staging. Alternatives C and D would allow staging to occur at the end of the existing access path in an area adjacent to the river.

Alternative C is the longest causeway, while Alternative D includes the greatest area of fill in the river. Alternative D offers many advantages, including a shorter construction period and the potential use of mats by the contractor rather than construction of a causeway for the entire construction length, if low flows during construction made use of mats feasible.

J. Doyle-Breen reviewed the list of permits required, including NH DES Wetland and Shoreland Permits; US Army Corps of Engineers General Permit regarding repair/maintenance of existing structures and fills, and potentially a Coast Guard Bridge Permit. Due to the presence of Atlantic salmon, an Essential Fish Habitat (EFH) analysis to be reviewed by the National Marine Fisheries Service (NMFS) will be required. NH Fish and Game (NHFG) indicated that there are wood turtles in the vicinity of the project site and requested that polypropylene erosion control be avoided and that the entire river width not be filled with riprap; both requests can be accommodated. The project area is also within the habitat range of the northern long-eared bat (NLEB); a bat survey was conducted, and no signs of bat were found. Consultation with the US Fish and Wildlife Service resulted in a "No Effect" determination for NLEB under the 2018 Federal Highway Administration, Federal Rail Administration, and Federal Transit Administration Programmatic Biological Opinion.

In regard to wetland mitigation, J. Doyle-Breen indicated that all temporarily disturbed areas for construction access would be restored and therefore would not require mitigation. Because the project involves replacement of previous fill, the compensatory mitigation exemption for repairing/maintenance of previous fills was assumed to apply and that mitigation for fill around the pier itself would not be required. If mitigation is required, the Town of Woodstock was contacted to identify whether there were any identified priority mitigation projects, and none have been identified.

J. Doyle-Breen closed the presentation by reiterating that Alternative I, Permanent Sheetpile, was the preferred alternative for the scour repair and that Alternative E was not preferred for access due to high cost. Of the remaining Alternatives, A through D were all viable and offered various pros

and cons, but that Alternative D was identified as the most advantageous option. All expressing opinions were in favor of Alternative I for the permanent repair, but extensive discussion amongst the attendees was held regarding the benefits and disadvantages of the various construction access alternatives, as detailed below.

Peter Steckler, Nature Conservancy, suggested that the access alternatives on the downstream side of the bridge would benefit from a shadow effect and limit erosion.

Bill Saffian, NHDOT Bureau of Bridge Design, emphasized the traffic impact associated with Alternatives A and B, as alternating one-way traffic would be required to accommodate construction vehicle access. He also noted that there would be a concrete cap on top of the permanent sheetpile for scour repair Alternative I, but that this would be cast out of the water rather than in-place.

Karl Benedict, NHDES Wetlands Bureau, stated that there were some concerns with water quality issues for any of the causeway alternatives and that any stone placed needed to be clean, washed stone. He noted that matting is a great option during the time of year with shallow flows. Rick Devanna, AECOM, explained that the causeways would likely be constructed by placing a geotechnical liner on the riverbed, with relatively large rock from the bottom of the access causeway to near the top, and finer/smaller rock material at top, filling voids to provide a construction vehicle drivable surface. The agencies expressed concern with use of finer material due to water quality concerns. Karl also stated that clarification was needed relative to the relief piping as shown and if there are additional impacts for these areas.

Lori Sommer, NH DES Wetlands Bureau, indicated that limitation on the extent of the causeway construction was her biggest concern. She suggested that construction could occur in the fall, when less traffic would minimize safety and traffic concerns associated with Alternatives A and B, since these had the shortest causeways. Regarding the pros identified for Alternatives C and D, L. Sommer indicated that she would want to see more detail regarding the difference in construction period and in the water quality measures to protect the river and bed referenced on the slides.

Carol Henderson, NH Fish and Game, stated that the state no longer has an Atlantic salmon management program in the Pemigewasset River, so any concerns about time of year restrictions would arise from the NMFS EFH review. J. Doyle-Breen indicated that feedback from NMFS had not yet been obtained. C. Henderson also indicated that she would prefer Alternative B because it involved a shorter causeway in the river.

Rick Kristoff, US Army Corps of Engineers, and Beth Alafat, EPA, both indicated that they had no questions or comments.

Sarah Large, NHDOT Bureau of Environment, indicated that she had received a note from Amy Lamb, NH Natural Heritage Bureau noting that coordination regarding the NLEB was needed*. In addition, S. Large asked L. Sommer to confirm that if the proposed permanent fill was within the footprint of the original fill placed to protect the bridge pier, then mitigation would not be required. L. Sommer agreed. S. Large also asked NH DES to confirm the assumption that even though the Pemigewasset is a Tier 3 Stream under the wetland regulation definitions, because the project was

not a new crossing and involved replacement of fill with no change to hydraulics, then the Stream Crossing Rules would not apply. K. Benedict confirmed this assumption and clarified that the wetland application should discuss hydraulics in a narrative format and explain why the river hydraulics will not change based on the proposed repairs.

Additional discussion was held amongst the group regarding the advantages and disadvantages of the various alternatives, including the need to consider the impacts of the project to Protected Shoreland. Shoreland impacts were not identified on the slides, but J. Doyle-Breen indicated that impacts to Protected Shoreland for Alternatives A and B were orders of magnitude greater than those for C and D, due to the presence of the existing access path on the north side of the river. J. Doyle-Breen indicated that in approximate numbers, Shoreland impacts for Alternatives A and B were between 11,000 and 14,000 square feet, whereas those for Alternatives C and D ranged between 2,500 and 3,500 square feet. Mark Hemmerlein, NHDOT Bureau of Environment, noted that the aerial photos suggest that access could be accomplished via Alternative B by driving equipment over a sandbar into the river, with minimal need for constructing a causeway. The discussion ended with an agreement that a site visit was needed to observe conditions associated with each alternative, and this was subsequently scheduled for Friday, May 29 at noon.

*Subsequent to the meeting, AECOM was asked to re-evaluate the IPaC questionnaire to confirm the “No Effect” finding and applicability of the 2018 Federal Highway Administration, Federal Rail Administration, and Federal Transit Administration Programmatic Biological Opinion for NLEB, and this review is currently underway.

This project was previously discussed at the 2/19/2020 Monthly Natural Resource Agency Coordination Meeting.